To: WELL Board
From: Maurice Weitman
Date: September 16, 1993

Subject: Proposed agenda for Board Meeting of September 17, 1993

A meeting of the WELL's Board of Directors is scheduled for Monday, September 17, 1993, in the conference room of Rosewood Stone Group, 1505 Bridgeway #201, Sausalito (415/331-4400). It will run from 10 am through 1 pm.

Proposed Agenda

When	Who	What
10:00	Mike	Call meeting to order
10:05	Mike	Review and accept agenda
10:10	Mike	Review and accept minutes from previous meeting
10:15	Maurice	Presentation of second and third quarter financials and approval of revisions for the balance of 1993
		Current system status
		Discussion and approval of new office space
		Discussion of front end development
		Discussion of marketing and growth plans
1:00	MEW	Adjourn

I'm looking forward to seeing and working with you!

Maurice

Maurice

attached:
Reforecast of 1993 spreadsheet
GUI Front End feature spec

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	G/L #		1993	Jan-93	Feb-93	Mar-93	Apr-93	May-93	Jun-93	Jul-93	Aug-93	Sep-93	Oct-93	Nov-93	Dec-93
2			Annual	31d Act	28d Act	31d Act	30d Act	31d Act	30d Act	31d Act	31d Est	30d Est	31d Est	30d Est	31d Est
3		**Model Parameters**	Averages												
4		Monthly Fees	15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00
5		Hourly Fee	2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00
6		Packet surcharge	4.00	$4.00	$4.00	$4.00	$4.00	$4.00	$4.00	$4.00	$4.00	$4.00	$4.00	$4.00	$4.00
7		HS Modem Surcharge	1.50	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00
8															
9		**Statistics**													
10		Avg Paid Hours/Month/Active	4.71	5.09	4.90	4.22	4.48	4.65	4.61	4.76	4.78	4.77	4.76	4.75	4.74
11		Avg Hours/Month/Payer	2.67	2.80	2.72	2.43	2.54	2.64	2.64	2.71	2.71	2.71	2.71	2.71	2.71
12		Average Billed Hours/Active	4.71	5.09	4.90	4.22	4.48	4.65	4.61	4.76	4.78	4.77	4.76	4.75	4.74
13		Paying Users	6,363	5,661	5,936	6,080	6,222	6,224	6,359	6,482	6,547	6,612	6,678	6,745	6,813
14		Active Paid Users	3,611	3,115	3,292	3,501	3,528	3,537	3,648	3,689	3,714	3,759	3,804	3,849	3,895
15		Pct actives to paying users	57%	55.03%	55.46%	57.58%	56.70%	56.83%	57.37%	56.91%	56.74%	56.85%	56.96%	57.07%	57.17%
16		Packet Hours	5,011	4,636	4,856	5,348	4,729	4,945	4,914	4,990	5,040	5,091	5,142	5,193	5,245
17		High Speed Hours	982	508	472	579	491	279	588	1,440	1,455	1,469	1,484	1,499	1,514
18		Logins/day (excl. staff)	3,240	3,072	3,394	3,431	3,409	3,187	3,280	3,172	3,063	3,124	3,187	3,250	3,315
19		Unique logins/month	4,111	3,550	3,761	4,043	4,061	4,054	4,177	4,216	4,209	4,251	4,294	4,337	4,380
20		New Registrations	370	328	475	493	414	402	410	378	334	300	300	300	300
21		User Cancels	237	241	195	263	263	239	281	280	281	200	200	200	200
22		WELL Cancels	15	13	14	4	1	19	13	32	8	20	20	20	20
23		Total Cancels (memo)	*252*	*254*	*209*	*267*	*264*	*258*	*294*	*312*	*289*	*220*	*220*	*220*	*220*
24		Net growth	1407	74	266	226	150	144	116	66	45	80	80	80	80
25		Growth rate	1.84%	1.31%	4.48%	3.72%	2.41%	2.31%	1.82%	1.02%	0.69%	1.21%	1.20%	1.19%	1.17%
26															
27		**Revenue**													
28	4010	Monthly fees	1,066,697	80,085	83,488	84,763	87,302	86,310	88,936	90,347	91,250	92,163	93,084	94,015	94,955
29	4020	Hourly fees	407,905	31,691	32,288	29,515	31,627	32,922	33,621	35,150	35,501	35,856	36,215	36,577	36,943
30	4030	Packet fees	240,520	18,544	19,425	21,393	18,918	19,781	19,657	19,961	20,161	20,362	20,566	20,772	20,979
31	4040	High speed fees	14,696	1,016	944	1,159	982	558	1,176	1,440	1,455	1,469	1,484	1,499	1,514
32	4050	Disk storage fees	45,127	3,549	2,349	2,552	2,468	3,426	3,974	4,358	4,402	4,446	4,490	4,535	4,580
33	4120	CPN Foreign Surcharge	31,199	1,652	2,568	2,324	2,438	1,961	2,632	2,865	2,893	2,922	2,952	2,981	3,011
34	4140	Manual fees	38,850	1,902	3,720	3,945	3,624	3,072	4,131	3,000	3,030	3,060	3,091	3,122	3,153
35	4150	Processing Fees	20,209	1,150	700	3,775	1,725	1,275	1,775	1,594	1,610	1,626	1,643	1,659	1,676
36	4160	Late Fees	14,027	865	973	1,011	1,098	1,168	1,235	1,248	1,260	1,273	1,285	1,298	1,311
37	various	Billing and Account Adjustments	(10,356)	1,346	(4,776)	(4,080)	(1,232)	860	(2,474)						
38	4900	Misc Adjustments	828	(660)				1,470	18						
39		**Gross Revenue**	1,869,702	141,140	141,679	146,356	148,949	152,803	154,682	159,963	161,562	163,178	164,810	166,458	168,122
40															
41		**Direct Costs of Operation**													
42	5030	Packet Services	243,138	18,468	21,178	22,148	20,151	20,051	20,224	19,655	19,852	20,050	20,251	20,453	20,658
43	5040	Phone Services	12,497	1,297	663	1,039	343	2,145	962	983	993	1,003	1,013	1,023	1,033
44	5050	Internet Expense	16,690	245	189	192	192	326	3,187	189	190	190	190	10,300	1,300
45	5060	Newsfeed Expense	2,400										800	800	800
46	5140	Manuals, etc. Expense	49,649	1,168	5,109	8,031	6,058	3,548	2,079	3,845	3,884	3,923	3,962	4,002	4,042
47		**Total Direct Costs**	324,375	21,179	27,139	31,410	26,744	26,070	26,452	24,672	24,918	25,166	26,215	36,578	27,832
48		Percent of Gross Revenue	17.35%	15.01%	19.16%	21.46%	17.95%	17.06%	17.10%	15.42%	15.42%	15.42%	15.91%	21.97%	16.55%
49		Gross Margin	1,545,327	119,961	114,540	114,947	122,205	126,733	128,230	135,290	136,644	138,012	138,594	129,880	140,290
50		Percent of Gross Revenue	82.65%	84.99%	80.84%	78.54%	82.05%	82.94%	82.90%	84.58%	84.58%	84.58%	84.09%	78.03%	83.45%

20%

/month

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	G/L #		1993	Jan-93	Feb-93	Mar-93	Apr-93	May-93	Jun-93	Jul-93	Aug-93	Sep-93	Oct-93	Nov-93	Dec-93
2			Annual	31d Act	28d Act	31d Act	30d Act	31d Act	30d Act	31d Act	31d Est	30d Est	31d Est	30d Est	31d Est
51		**Indirect Costs of Operation**													
52		**Personnel**													
53		General Manager (incl bonus)	107,500	8,750	8,750	8,750	8,750	6,250	6,250	10,000	10,000	10,000	10,000	10,000	10,000
54		Sr. Programmer	10,000											5,000	5,000
55		System Administrator	47,075	7,686		1,389	4,167	4,167	4,667	4,167	4,167	4,167	4,167	4,167	4,167
56		Programmer	13,783	3,167	3,334	615								3,333	3,333
57		Technical Intern													
58		Customer Support Manager	42,000	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
59		Customer Support Reps	104,118	6,563	6,563	7,000	7,718	7,844	8,199	9,077	9,077	9,077	11,000	11,000	11,000
60		Conferencing Manager	40,000	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333
61		Conferencing Assistants	13,333									3,333	3,333	3,333	3,333
62		Office Manager	42,000	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
63		Accounting and Billing Support	39,978	10,259	337	2,929	2,988	2,921	3,878	3,427	3,614	2,406	2,406	2,406	2,406
64		Bookkeeper	6,000	2,000	2,000	2,000									
65		Payroll Taxes	40,770	6,221	3,049	2,905	2,859	2,686	4,149	2,242	2,283	3,145	3,299	3,966	3,966
66		Benefits	21,289	1,951	2,297	1,762	1,761	1,907	1,894	1,686	1,686	1,401	1,470	1,767	1,767
67		Staff Bonuses	43,929						22,000	3,574	2,947	3,246	3,454	4,354	4,354
68		**Total Personnel**	571,775	56,930	36,663	37,683	38,576	36,108	61,210	44,506	44,107	47,109	49,462	59,659	59,659
69		Percent of Gross Revenue	30.58%	40.34%	25.88%	25.75%	25.90%	23.63%	39.64%	27.82%	27.30%	28.87%	30.01%	35.84%	35.49%
70		**Computer Operations**													
71	6610.2	Computer Space Rent	5,712	476	476	476	476	476	476	476	476	476	476	476	476
72	6620.2	Electricity	5,750	500	500	500	500	500	500	500	500	500	500	500	250
73	6630.2	Hardware (equipt & leases)	6,760		883	205	1,251		1,421	500	500	500	500	500	500
74	6640.2	System Software	250								50	50	50	50	50
75	6650.2	Modems	18,380				3,471	9,270		639				2,500	2,500
76	6670.2	Maintenance & Repair	23,309	1,433	1,443	2,011	1,693	1,443	1,443	1,443	2,800	2,800	2,800	2,800	1,200
77	6680.2	Research & training	2,090				90					500	500	500	500
78	6500.2	Contract Support/Programming	74,192	5,129	6,705	10,059	6,699	5,075	5,075	5,075	5,075	5,075	5,075	5,075	10,075
79		Technical Payroll + Benefits	81,132	12,427	3,817	2,295	4,771	4,771	5,343	4,771	4,771	4,771	4,771	14,312	14,312
80		**Total Computer Operations**	217,575	19,964	13,824	15,546	18,951	21,535	14,258	13,404	14,172	14,672	14,672	26,713	29,863
81		Percent of Gross Revenue	11.64%	14.14%	9.76%	10.62%	12.72%	14.09%	9.22%	8.38%	8.77%	8.99%	8.90%	16.05%	17.76%
82		**Sales/Marketing**													
83		Travel & entertainment	6,000										2,000	2,000	2,000
84	6910.4	Promotional materials	6,815	509	1,045	353	1,165	650	98	495	500	500	500	500	500
85	6900.4	Promotional Events	1,495		375				20	350	150	150	150	150	150
86		Public Relations services	10,000											5,000	5,000
87		Advertising	5,000											2,500	2,500
88	6930.4	Network subscriptions	120	10	10	10	10	10	10	10	10	10	10	10	10
89		Miscellaneous sales expense	600										200	200	200
90		**Total Sales/Marketing**	30,030	519	1,430	363	1,175	660	128	855	660	660	2,860	10,360	10,360
91		Percent of Gross Revenue	1.61%	0.37%	1.01%	0.25%	0.79%	0.43%	0.08%	0.53%	0.41%	0.40%	1.74%	6.22%	6.16%

5%

5%

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	G/L #		1993	Jan-93	Feb-93	Mar-93	Apr-93	May-93	Jun-93	Jul-93	Aug-93	Sep-93	Oct-93	Nov-93	Dec-93
2			Annual	31d Act	28d Act	31d Act	30d Act	31d Act	30d Act	31d Act	31d Est	30d Est	31d Est	30d Est	31d Est
92		**Office Expense**													
93	7010	Office Rent	41,006	2,646	2,646	2,646	2,646	2,646	2,646	2,646	2,646	2,646	2,646	8,596	5,950
94	7020	Office Utilities	6,331	567	443	439	350	462	417	403	650	650	650	900	400
95	7030	Computer Hardware	2,707	98	178	42	589			300	300	300	300	300	300
96	7040	Computer Software	1,646		30				71	1,044	100	100	100	100	100
97	7050	Repairs & Maintenance	2,806	90	258	288	160	190	160	160	300	300	300	300	300
98	7060	Postage	5,015	292	257	499	674	444	1,403	447	200	200	200	200	200
99	7070	Office Supplies	11,277	295	708	1,293	1,298	563	547	573	1,200	1,200	1,200	1,200	1,200
100	7080	Phones	14,386	1,442	1,048	736	1,746	1,507	1,161	746	1,200	1,200	1,200	1,200	1,200
101	7090	Office Advertising	2,824	1,156		468				200	200	200	200	200	200
102	7100	Office Equipment Rent	656		164			164			164			164	
103		**Total Office Expense**	88,654	6,586	5,732	6,411	7,463	5,976	6,405	6,519	6,960	6,796	6,796	13,160	9,850
104		Percent of Gross Revenue	4.74%	4.67%	4.05%	4.38%	5.01%	3.91%	4.14%	4.08%	4.31%	4.16%	4.12%	7.91%	5.86%
105		**Customer Support**													
106	6500.3	Customer Support Programmer PH	19,464	1,315	1,550	1,909	1,590	150	2,040	910	2,000	2,000	2,000	2,000	2,000
107	6820.3	Customer Support 800 Line	1,100	81	81	215	84	47	64	28	100	100	100	100	100
108	6830.3	Customer Support Misc. Exp.	4,420		68	1,580	110	212	14	1,436	200	200	200	200	200
109		**Total Customer Support**	24,984	1,396	1,699	3,704	1,784	409	2,118	2,374	2,300	2,300	2,300	2,300	2,300
110		Percent of Gross Revenue	1.34%	0.99%	1.20%	2.53%	1.20%	0.27%	1.37%	1.48%	1.42%	1.41%	1.40%	1.38%	1.37%
111		**Conferencing**													
112	6500.5	Conferencing Programming BH	7,525	500					1,525		500	500	1,500	1,500	1,500
113		**Total Conferencing**	7,525	500					1,525		500	500	1,500	1,500	1,500
114		Percent of Gross Revenue	0.40%	0.35%					0.99%		0.31%	0.31%	0.91%	0.90%	0.89%
115		**General & Administrative**													
116	7510	Insurance	3,891		1,206	(735)	105	105	105	105	600	600	600	600	600
117	7800	Bad Debts (>120 days)	79,665	6,958	5,048	3,758	7,248	6,518	5,978	7,000	7,140	7,283	7,428	7,577	7,729
118	7520	Outside Prof'l Services incl FH	17,863	1,718	2,901	2,889	2,013	1,652	690	1,000	1,000	1,000	1,000	1,000	1,000
119	7530	Licenses, Fees, Taxes, Memberships	4,706		5	1,401		50		(50)	2,500	200	200	200	200
120	7540	Bank Fees	39,957	3,281	2,990	3,080	277	6,346	3,317	3,359	3,393	3,427	3,461	3,496	3,531
121	7560	Meals and Entertainment	3,775	29	652	213	388	193	400	150	350	350	350	350	350
122	7550	Travel G & A	4,984		94			298	163	229	1,500	400	400	1,500	400
123	7690	Miscellaneous	1,116					1,081	35						
124	6500.1	Point/Rosewood Consulting Fee	24,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
125	7500	Office Outside Services	6,877	158	130	78	74	73	82	82	100	100	2,000	2,000	2,000
126	7600	Legal and Accounting Services	7,377	1,000	150	985			129	113	1,000	2,000	2,000		
127	7580	Board-related Expenses	9,417		1,056				361			4,000			4,000
128		**Total G&A**	203,628	15,144	16,232	13,669	12,105	18,316	13,260	13,988	19,583	21,360	19,439	18,723	21,809
129		Percent of Gross Revenue	10.89%	10.73%	11.46%	9.34%	8.13%	11.99%	8.57%	8.74%	12.12%	13.09%	11.80%	11.25%	12.97%
130															
131		**Total Indirect Costs**	1,063,038	88,613	71,764	75,082	75,282	78,233	93,661	76,875	83,511	88,626	92,259	118,103	121,030
132		Percent of Gross Revenue	56.86%	62.78%	50.65%	51.30%	50.54%	51.20%	60.55%	48.06%	51.69%	54.31%	55.98%	70.95%	71.99%
133		**Total Costs**	1,387,413	109,792	98,903	106,491	102,026	104,303	120,113	101,547	108,429	113,791	118,474	154,681	148,862
134		Percent of Gross Revenue	74.21%	77.79%	69.81%	72.76%	68.50%	68.26%	77.65%	63.48%	67.11%	69.73%	71.89%	92.92%	88.54%
135		**EBDIT**	**482,289**	**31,349**	**42,776**	**39,865**	**46,923**	**48,500**	**34,569**	**58,415**	**53,133**	**49,386**	**46,335**	**11,777**	**19,260**
136		Percent of Gross Revenue	25.79%	22.21%	30.19%	27.24%	31.50%	31.74%	22.35%	36.52%	32.89%	30.27%	28.11%	7.08%	11.46%

Never has a busy signal

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	G/L #		1993	Jan-93	Feb-93	Mar-93	Apr-93	May-93	Jun-93	Jul-93	Aug-93	Sep-93	Oct-93	Nov-93	Dec-93
2			Annual	31d Act	28d Act	31d Act	30d Act	31d Act	30d Act	31d Act	31d Est	30d Est	31d Est	30d Est	31d Est
137															
138		**Depreciation**	160,613	5,884	5,884	5,884	5,884	5,884	5,884	5,884	5,884	5,884	5,884	5,884	**95,884**
139		**Interest Income (Expense)**													
140	4902	Interest rec'd from cash in bank	4,082	160	144	164	416	421	471	306	400	400	400	400	400
141	8510	Loan interest paid	(900)	(200)	(200)	(200)	(200)	(100)							
142		**Interest Income (Expense)**	3,182	(40)	(56)	(36)	216	321	471	306	400	400	400	400	400
143															
144		**Earnings Before Taxes**	324,857	25,424	36,836	33,944	41,255	42,937	29,156	52,836	47,648	43,902	40,851	6,293	(76,224)
145															
146		Corporate taxes	145,600			12,650			12,650			12,650			107,650
147		(~$113,000 fed $32,500 CA)													
148		**Net Earnings**	179,257	25,424	36,836	21,294	41,255	42,937	16,506	52,836	47,648	31,252	40,851	6,293	(183,874)
149		**Capital Budget**							Macs Phns						
150		Host systems	90,091					1,250		84,500		4,341			
151		Modems & Telecom	13,212						8,212				5,000		
152		Office equipment	33,800		3,000				10,100	4,100	1,600	15,000			
153		Moving Expense	82,000									1,000	2,000	79,000	= 82K
154		Front End													
155		**TOTAL CAPITAL BUDGET**	219,103		3,000			1,250	18,312	88,600	1,600	20,341	7,000	79,000	
156															
157															
158		**Estimated moving costs**													
159		Design and consulting	4,000												
160		Furniture	30,000												
161		Moving	12,000												
162		Construction	15,000												
163		Wiring	10,000												
164		PacBell CPN charges	11,000												
165			82,000												
166															

Other Capital Items for remainder of 1993

*	Sep-93	Macs and Ethernet	15000
	Oct-93	UPS, Racks for modems	5000

* Approved previously

[46 lines 32/14

- Rent = 1.75/foot = 3K/month/1K utl
- New = 27K sq ft 1.80/sq ft

This document was written by Earl Crabb, a host of the frontend conference. It identifies the design goals for a GUI (graphical user interface) front end for the WELL, as well as some of the issues yet to be resolved.

The information was distilled from ongoing staff discussions, user feedback from the frontend conference, and years of suggestions and complaints from new and veteran users.

Design Goals

1. The front end program (FE) should comprise:
   a. a user interface appropriate to the specific platform for:
      i. MS-DOS and a text screen
      ii. MS-DOS and a graphics screen
      iii. MS-Windows (on a graphics screen)
      iv. Macintosh running system 6
      v. Macintosh running system 7
      vi. X-Windows

   b. communications handlers for:
      i. PC clones, for COM1 through COM8, running MS-DOS
      ii. PC clones running MS-Windows
      iii. Macintosh system 6 without Communications Toolbox
      iv. Macintosh system 6 with Communications Toolbox
      v. Macintosh system 7
      vi. Unix (for X-Windows)

   c. scripting language
      i. for logging into the WELL via direct call
      ii. for logging into the WELL via telnet over Internet
      iii. for logging into the WELL via CPN
      iv. for logging into the WELL via CPN
      v. for tailoring your own peculiar logging in sequence
      vi. once logged in, run your own preferred sequence of activity (e.g., mail, then conferencing)
      vii. ability to use time, date, etc., in conditional statements within scripts (e.g., to login via CPN if before 11pm, directly after 11pm)
      viii. ability to specify various FE locations, e.g., at "home", at "the office, on a LAN", "at a hotel in Dubuque", from which FE will know how to dial out, via scripting

   d. conferencing handler
      i. supports universe/conference/topic/response architecture (by universe I mean WELL, GBN, etc.)
      ii. full offline reader support
         1. transparent download of new material
         2. keeps local material synchronized with host material
         3. maintains conferencing architecture locally as on host

   e. mail handler
      i. options to read mail online or offline, answer online or offline
      ii. ability to save mail at host, offline, or both
      iii. maintenance of a mailing list, including full net addresses
      iv. ability to insert address from list into outgoing mail headers
      v. common mail addresses (AOL, CIS, etc.) easy to insert
      vi. ability to attach file to mail, at least on local mail
      vii. simple click to copy outgoing mail to yourself

f. navigation handlers
   i. easy movement between major components (conferencing, mail, uploading, downloading, sends, etc.)
   ii. ability to keep multiple components simultaneously active (in appearance, if not in fact) e.g.,
      1. look up of users' .plan files, etc., from anywhere
      2. send and reply, from anywhere
      3. mail, from anywhere
      4. graphic map of the WELL showing Conferences, email, etc.

g. downloader and uploader
   i. ability to upload and download while performing other functions, such as conferencing, sends, or mail
   ii. compression should be available, its method transparent
   iii. compression should not be mandatory (if the modems are already doing compression, or you're transferring an already compressed file, further compression attempts can be detrimental)
   iv. ability to handle 7-bit and 8-bit network issues

h. send/reply handler
   i. ability to allow or disallow the send to pop-up while user is doing something else.
   ii. ability to save (or not), sends and replies to disk

j. offline reader functions
   i. WELL-like editor for writing mail, responses, sends
   ii. ability to call your own preferred editor, if desired
   iii. editor can be invoked offline while in offline reader, reading mail, responses, sends, etc.
   iv. ability to login at any time
   v. normal editor functions, including inserting file, etc
   vi. ability to read offline conferences/topics/responses as you would online
   vii. housekeeping, deleting old topics, backing up to diskette or tape, etc.
   viii. a good search capability (offline setup, online search?)

k. User Interface
   i. Any screen that allows material to scroll offscreen must be able to be scrolled back to view the offscreen material.
   ii. Every display identifies itself, either by WELL location or by its own function. (e.g., Mail, Music Conf Topic 33, etc.)

m. hidden or partially hidden FE functions:
   i. maintain list of CPN numbers locally, or other access numbers.
   ii. ability to go into dumb terminal mode to talk to Pico or csh directly
   iii. in dumb terminal mode, must have excellent vt100 emulation
      1. for use with WELL utilities
      2. for use in telnetting to other systems
   iv. very good save-to-disk functionality
   v. very good send-to-printer functionality

2. The host end changes to accomodate the FE should:
   a. be minimal in scope
   b. use existing capabilities wherever possible
   c. include error-free communications with the FE
      i. MNP, X.PC, or what?
      ii. this is considered very important by many (including me)
      iii. hardware as well as software needs to be considered
   d. include a reverse "extract", i.e., a routine that posted responses

3. FE Construction
   a. As much code as possible should be reusable across platforms.
   b. The analysis and design work should be object oriented, to facilitate reusability and transportability, whether or not the actual code is object oriented.

Open Issues

1. How can the error-free communications be handled? MNP? X.PC?
   Can the host invoke something appropriate after login?
   Would another login sequence be needed?
   Can we make it optional if the user has an MNP modem?

2. How would odd exceptions be handled, e.g.,
   a) A conference changes names
   b) A topic is retired, later unretired
   c) A forgotten topic is remembered

3. How should slippage (due to delay in posting) be handled, if at all?

4. Should he specification for the FE and/or the communication between the FE and the host be published? Before implementation? After implementation? Ever?